



Building Standards and Codes

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TECHNICAL BULLETIN

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19 NYCRR Part 1222 – PLUMBING SYSTEMS²

Topic: Minimum Required Toilet Facilities Based on Occupancy

This document provides clarification on the minimum number and distribution of required water closet fixtures and toilet facilities based on Use/Occupancy Classification; on Occupant Load; and, where provided, on the option for multi-user facilities designed for the use of all persons regardless of their sex.

Provisions for the “*Minimum Number of Required Plumbing Fixtures*” for buildings and structures regulated under the 2020 Building Code of New York State³ (2020 BCNYS) are found in Section 2902.1 and Table 2902.1 of the 2020 BCNYS and in Section 403.1 and Table 403.1 of the 2020 Plumbing Code of New York State (2020 PCNYS).

Section 2902.1.1 of the 2020 BCNYS and Section 403.1.1 of the 2020 PCNYS require that the occupant load of each sex be determined by dividing the total occupant load in half, and that fractional numbers be rounded up to the next whole number. Additionally, that “*plumbing fixtures located in single-user toilet facilities and bathing rooms, including family or assisted-use toilet and bathing rooms, shall contribute toward the total number of required plumbing fixtures... and shall be deducted proportionately, from the required gender ratios*” given in the Tables (emphasis added).

According to Section 2902.1.2 of the 2020 BCNYS, single-user facilities “*shall be identified as being available for use by all persons regardless of their sex.*” The same language is provided in Section 403.1.2 of the 2020 PCNYS.

All buildings shall have facilities that are accessible for persons with disabilities in accordance with Section 1109.2. of the 2020 BCNYS (with exceptions). Per Section 1109.2.2, where facilities with multiple compartments are provided, “*at least 5 percent of the total number of compartments shall be wheelchair accessible. Where the combined total water closet compartments and urinals provided in a toilet room or bathing room is six or more, at least 5 percent... shall be ambulatory accessible... in addition to the wheelchair accessible compartment.*”

Below are a few examples of how to calculate the minimum number of required toilets fixtures:

Example 1 (B Occupancy):

Minimum fixture tables require that at least 1 water closet be provided for each 25 occupants “*for the first 50 and 1 per 50 for the remainder exceeding 50*” in a Business occupancy. Using exception number 4 to Section 2902.2, separate facilities are not required if the total number of employees and customers is 25 or less. And, a minimum of two toilet facilities are required, one for each sex, in spaces with a total occupant load of more than 25 and less than 50. In a Business occupancy with an occupant load greater than 50, two additional toilet fixtures (one for each sex) are required for each 50 additional occupants or portion thereof.

Assume an occupant load of 51, which divided in half equals 25.5 for each sex. The load is rounded up to 26, and since

¹ The “Code Effective Date” for this Technical Bulletin is May 12, 2020, which is the effective date of the 2020 update of the New York State Uniform Fire Prevention and Building Code (the Uniform Code).

² The Uniform Code is contained in Title 19 of the Official Compilation of Codes, Rules and Regulations of the State of New York (19 NYCRR) Parts 1220 through 1227 and the publications incorporated by reference into those Parts, including, but not limited to the 2020 NYS-specific code books which are based on the 2018 International Code Council books.

³ Access to online versions of the 2020 Codes of New York State may be found on the [DBSC website](#) and the [ICC's website](#).

one fixture is required for each 25 occupants, this means two fixtures for each sex, or four fixtures total are required.

Example 2 (F or S Occupancy):

Similar to Example 1 and using exception number 2 to Section 2902.2, only one toilet facility is required in Factory, Industrial, and Storage structures and tenant spaces with an occupant load of 15 or less. Two toilet facilities as noted in the previous example are required for an occupant load between 16 and 100. Two additional toilet fixtures are required for each additional 100 occupants or portion thereof.

Example 3 (A-4 or A-5 Occupancy):

In a coliseum or in a stadium with an occupant load of 3,000, which equals 1,500 male and 1,500 female occupants, 20 toilet fixtures are required for men ($1,500 / 75$) and 38 fixtures are required for women ($1,500 / 40 = 37.5$, rounded up to 38).

If the occupant load was increased to 3,001, it equals 1500.5, rounded up to 1501 of each sex. Therefore, 21 toilet fixtures are required in the men's bathroom ($1,500 / 75 + 1$ per additional 120 or fraction). The required number of fixtures in the women's bathroom remains at 38 unless the occupant load increases to 3,041 ($3,041 / 2 = 1520.5$, rounded up to 1521, then $1,520 / 40 + 1$ per additional 60 or fraction = 39).

Multiple Possible Combinations

Wherever two or more toilet fixtures are required, those could be provided in any combination of single-user, multi-user gender-separated facilities, and multi-user facilities designed for use by all persons regardless of their sex. Applying this to example 3 above, and assuming that 20 fixtures are required for men and 38 fixtures are required for women, those could be distributed in practically limitless combinations of toilet facilities, such as:

Option a

9 single-user facilities, plus a multi-user facility with 49 toilet fixtures, designed for use by all genders. Note that if urinals were to be used in the multi-user facility as a substitute for toilet fixtures, they can only substitute a maximum of 67% of the fixtures intended for males, or in this case, 13 fixtures (see Section 424.1 of the 2020 PCNYS). Also, when placed in a non-gender separated facility, *"urinals shall be either located in stalls, or located in an area visually separated from the remainder of the facility"* (see Section 2902.1.3 of the 2020 BCNYS).

9 single-user facilities
1 non-separated multi-user
facility with 49 fixtures
 $9 + 49 = 58$ Total Fixtures
(with a maximum of 13 urinals)

Option b

9 single-user facilities, plus two multi-user facilities separated by gender. In order to maintain proportionately distributed gender ratios (see section 2902.1.1 of the 2020 BCNYS), the balance of multi-user, gender separated facilities must be distributed in the same proportion as the $20 + 38$ fixtures calculated in the example. Therefore, the men's bathroom would contain 17 toilet fixtures and the women's bathroom 32 toilet fixtures.

9 single-user facilities
1 male multi-user with 17 fixtures
1 female multi-user with 32 fixtures
 $9 + 17 + 32 = 58$ Total Fixtures

Option c

9 single-user facilities, plus one multi-user facility not separated by gender with 16 toilet fixtures, plus a men's bathroom with 11 toilet fixtures (where a maximum of 7 could be urinals), and a women's bathroom with 22 toilet fixtures.

9 single-user facility
1 non-separated multi-user
facility with 16 fixtures
1 male multi-user with 11 fixtures
1 female multi-user with 22 fixtures
 $9 + 16 + 11 + 22 = 58$ Total Fixtures

Option d

One facility designed to serve all genders with 58 toilet fixtures, where a maximum of 13 fixtures are urinals.

This document is not a design guide. It is intended to address the most common issues pertaining to the determination and distribution of the required number of toilet fixtures. Additional provisions apply, such as the required number of lavatories, showers, and drinking fountains, as well as provisions for the design requirements applicable where facilities to serve all persons regardless of their sex are provided.